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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/548,311	09/07/2005	Keith Hart	SMB-PT157(PC 04 01 B US)	6123
3624	7590	06/18/2009	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			RIVELL, JOHN A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/548,311	Applicant(s) HART, KEITH	
	Examiner JOHN RIVELL	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,13,21,22 and 24-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21,30-34 and 40 is/are allowed.
- 6) ☒ Claim(s) 3,13,22,24-28 and 35-39 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed March 9, 2009 have been fully considered but they are not persuasive.

Claims 1, 2, 4-12, 14-20 and 23 have been canceled. New claims 36-40 have been added. Thus claims 3, 13, 21, 22 and 24-40 are pending.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 36 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 recites the limitation "housing components" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Based on claim 3, this recitation should read -- housing parts -- and for the purpose of the rejection below is how this recitation is read.

Claim 39 recites the limitation "the annular housing walls" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. For the purpose of the rejection below, this recitation is taken to mean the opposed clamping surfaces holding the seal in place.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 13, 22, 24, 28 and 35-39 are rejected under 35 U.S.C. §102 (b) as being anticipated by Blagg (U. S. Pat. No. 2,859,771).

The patent to Blagg discloses, in the figures for example, a “through-flow regulator (generally at seat/body 11; the valve element 15 opens and closes in response to fluid pressure and thus “regulates” fluid flow at least between an on/fluid flow and off/fluid not flowing positions), that is insertable into a gas or liquid line (defined by the body on which housing 11 is seated), comprising a housing (11 and support 13 connected by webs 22), with at least one throttle or regulating body (15) being arranged inside said housing (11), defining a control gap (the “gap” is located between the inner periphery the housing 11 and the cooperating external face of the valve head 15) between the throttle or regulating body (15) and a housing (11) wall, with the control gap (the “gap” between these surfaces) changing depending on pressure (as the pressure rises the gap widens, as the pressure falls the gap closes) to regulate the flow (e.g. allow, not allow, limit flow - any position the valve element 15 occupies that is not the closed position preventing fluid flow or the full open position allowing full fluid flow limits fluid flow through the valve and thus “regulates”) in a flow through direction (from the inlet to the outlet), the housing (11) is comprised of at least two housing parts (11 and bolt 16/washer 18) and between the facing sides of two housing parts, a housing seal (at 23) is provided, which is integrally connected in one piece to the at least one throttle body or regulating body (15) supported inside the housing (11)” as recited in clam 3.

Regarding claim 13, in Blagg, “the throttle body (15) is mounted in a housing chamber (the inside of housing 11) between the upstream and the downstream housing

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part (support 13 and bolt 16/washer 18, respectively) and the downstream housing part (bolt 16) is provided with an interior housing wall (e.g. the exterior surfaces of the bolt 16 and/or the external periphery of washer 18) forming a limit of the control gap or a similar rest for the annular throttle body (15)” as recited. That is, the external surfaces of the bolt and/or washer which come into contact with the valve element 15 form a “limit” of the “control gap or a similar rest” by limiting the opening stroke of the valve element.

Regarding claim 22, in Blagg, “the at least one throttle body (15) is lipped shaped” as recited.

Regarding claim 24, in Blagg, the at least one throttle body (15) is lipped shaped and is aligned with a free lip end region thereof (i.e. that end opposite the end clamped between the housing portions) extending diagonally opposite the through flow direction”. From a point on the very tip of the free end of valve element 15, the valve element “extends (towards the clamped end in a direction) diagonally opposite the flow through direction” as recited.

Regarding claim 28, in Blagg, “at least one of the housing parts (housing part 11) comprising at least two approximately concentric annular walls (one wall read at the inner periphery of the cylinder 11, the other wall read at the periphery of support 13), connected via approximately radial connection bars” read on the spider like arms 22 connecting base 13 to housing 11 while allowing fluid flow therethrough. See fig. 3.

Regarding claim 35, in Blagg, “at least one housing wall (read at the inner periphery of the housing portion 11), limiting a control gap (the “gap” between the

housing wall and the cooperating face of valve 15), is provided with a regulating profiling (e.g. a surface contour cooperating with the external surface of the valve element 15) extending approximately in the through-flow direction” as recited.

Regarding claim 36, in Blagg, “the housing components (cylinder portion 11 and support 13 as on the component; bolt 16 and washer 18 as the other component) are provided with annular surfaces (the downstream facing surface of support 13 and the upstream facing surface of washer 18) facing one another, between which the housing seal (23) is clamped” as recited.

Regarding claim 37, in Blagg, “a central housing portion (read as the centrally located male threaded portion of bolt 16) of a first housing part (bolt 16 and washer 18) engages a central recess (the female threaded recess of the support 13) of a second housing part (support 13)” as recited.

Regarding claim 38, in Blagg, “the housing seal (at 23) is connected on both (i.e. opposing) sides to at least one throttle body (the downstream extending “lip” 15), said throttle bodies (i.e. opposed lips 15) are each supported on the inside of said housing (e.g. “supported” by the interior periphery of housing 11) in a respective control gap” e.g. the “lips” 15 are located within the “gap” defined between the interior peripheral housing wall of cylinder 11 and the cooperating face of valve 15.

Regarding claim 39, in Blagg, “the annular housing walls (the downstream facing surface of support 13 and the upstream facing surface of washer 18) clamping the housing seal (23) on faces therebetween separate the control gaps allocated to the throttle bodies (15)”. That is, the “gaps” on each side of the valve device, looking in

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cross section at a right and left side, are separated from each other by the support element 13 and/or the bolt 16/washer 18. The “gap” on the right is separated from the “gap” on the left by the support element 13 and/or the bolt 16 washer 18 combination.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blagg (U. S. Pat. No. 2,859,771) in view of Cummings (U. S. Pat. No. 3,022,796).

The patent to Blagg discloses all the claimed features with the exception of having a “control stop” limiting motion of the “lip shaped throttle body”.

The patent to Cummings discloses that it is known in the art to employ a “control stop” read at the exterior periphery of the central extension 36 which upon full opening contacts the downstream surface of lip shaped closure element 17 for the purpose of limiting opening motion of the valve element 17.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Blagg a central extension extending from bolt 16 for example, for the purpose of limiting opening motion of the lip shaped valve element 15 therein as recognized by Cummings.

Regarding claim 26, in Blagg, “the at least one lip-shaped throttle body (15) comprises a lip section (read at 23), aligned approximately laterally to the flow through direction, which extends into the free lip end region (that portion of the valve 15 at the tip which contacts the inner periphery of the cylinder 11) aligned opposing the through-flow direction”. From a point on the very tip of the free end of valve element 15, the

valve element 15 extends and is “aligned opposing the through-flow direction” as recited.

Regarding claim 27, in Blagg, “the lip section (read at 23) approximately aligned lateral to the through-flow direction, cooperates with the control stop” connected for example, to the bolt 26 as taught by Cummings.

Response to Arguments

Regarding applicants remarks as they apply to the above and particularly to Blagg, the Examiner agrees that a comparison of figure 1 of Blagg and figure 4 of the instant application concludes that the flow directions of the two devices are opposite to one another. However, there is no claim language which distinguishes this difference. The device of Blagg “regulates” flow in the flow through direction in that, in the event the valve element 15 assumes a position between that in which it contacts the inner periphery of the cylinder 11, i.e. closed, and that in which full fluid flow through the valve occurs, the valve element 15 occupies an intermediate position therebetween at which the fluid flow through the valve device is regulated. Even if the valve element could not ever assume such an intermediate position, flow regulation occurs at least between the position the valve is closed and the full open position such that fluid flow either occurs or not.

It is further agreed that in Blagg, “the control gap (does not) change depending on pressure to regulate flow in a flow through direction which regulates flow if a higher pressure medium is being discharged by reducing the control gap size”. However, the claim(s) at issue here do not require reduction of the control gap size in response to

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increasing pressures applied. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Outside of the alleged functions lacking as noted above, applicant point to no structural detail recited in the claim that is lacking in Blagg.

With respect to claim 24, applicants argument that Blagg fails to include a “free lip end region thereof extending diagonally opposite (emphasis in original) the flow-through direction” clearly relies on an interpretation of this claim language that reads into the claim the “free lip end region” extending from the base section of the seal element at an angle to the free end region in a direction opposite to the direction in which fluid flows through the valve. The current claim language however, does not specify “from” where the extension begins and extends to. The claim language recites “...a free lip end region thereof extending diagonally opposite the through flow direction”. As noted above, the lip shaped part 15 of Blagg has a “free end region” i.e. that end opposite the end or base 23 clamped between the housing portions. From a point on the free end, the lip shaped part extends diagonally opposite, relative to the flow through direction, toward the base 23. This “lip shaped” portion of the valve element thus reads on the claim language.

Regarding applicants remarks concerning claim 25, as taught by Cummings, the device of the proposed combination of references includes a “control stop” to limit opening motion.

Regarding applicants remarks concerning claim 26, as set forth above, “the at least one lip-shaped throttle body (15 of Blagg) comprises a lip section (read at 23 of Blagg), aligned approximately laterally to the flow through direction, which extends into the free lip end region (that portion of the valve 15 at the tip which contacts the inner periphery of the cylinder 11) aligned opposing the through-flow direction”. From a point on the very tip of the free end of valve element 15, the valve element 15 extends and is “aligned opposing the through-flow direction” as recited.

Regarding applicants remarks concerning claim 27, “the lip section (read at 23 of Blagg is) approximately aligned lateral to the through-flow direction (and) cooperates with the control stop” connected for example, to the bolt 26 as taught by Cummings.

Regarding applicants remarks concerning claim 35, as noted above the “regulating profiling” of Blagg is read at the contour of the inner peripheral surface of the cylinder 11. It is agreed that “in the present case flow is designed to be in an opposing direction to the arrangement of Blagg and the regulating profiling is between the ends of the sealing lip (equivalent to 25 in Blagg) and the inner wall of the housing (equivalent to the housing 11 of Blagg)”. However, as alluded to above the claim(s) at issue here do not include specific language that sets forth the flow direction difference between the instant application and Blagg.

Claims 21, 30-34 and 40 are allowed.

Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/
John Rivell
Primary Examiner
Art Unit 3753**